DOCUMENT RESUME

ED 450 199 UD 034 020

AUTHOR	Huang, Chien-Chung; Garfinkel, Irwin; Waldfogel, Jane
TITLE	Child Support and Welfare Caseloads. Discussion Paper.
INSTITUTION	Wisconsin Univ., Madison. Inst. for Research on Poverty.
SPONS AGENCY	National Inst. of Child Health and Human Development (NIH), Bethesda, MD.
REPORT NO	IRP-DP-1218-00
PUB DATE	2000-12-00
NOTE	48p.
CONTRACT	HD19375
AVAILABLE FROM	Institute for Research on Poverty, 1180 Observatory Dr., Madison, WI 53706. For full text: http://www.ssc.wisc.edu/irp/.
PUB TYPE	Reports - Research (143)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Child Support; Child Welfare; *Welfare Recipients; *Welfare Services
IDENTIFIERS	Aid to Families with Dependent Children; *Child Support Enforcement

ABSTRACT

This report tests the hypothesis that strong child support collection is associated with lower welfare caseloads. It uses annual state panel data from 1980-96 to replicate previous models and incorporate the effects of child support. The primary analysis technique is fixed effects regression of welfare caseloads with welfare caseloads as the dependent variable, and child support, demographic, economic, welfare, and political variables as independent variables. The key independent variable is the strength of the state's child support enforcement system. Results indicate that child support plays a moderate to large, and hitherto unrecognized, role in reducing welfare caseloads. Specifically, depending on the model, estimates imply that the improvement in child support collection between 1980-96 reduced welfare caseloads by 12-17 percent in 1996. The inclusion of child support largely improves the ability to explain the change in welfare caseloads that would not be explained by welfare and/or economic factors alone, although it also somewhat decreases the estimated effect of those other factors. (Contains 37 references.) (SM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 450 199

Institute for Research on Poverty
Discussion Paper no. 1218-00

Child Support and Welfare Caseloads

Chien-Chung Huang
Department of Human Services
Bowling Green State University
E-mail: chuang@bgnet.bgsu.edu

Irwin Garfinkel
School of Social Work
Columbia University

Jane Waldfogel
School of Social Work
Columbia University

December 2000

This research was supported by grant HD19375 from the National Institute of Child Health and Human Development. The authors thank Rebecca Blank, Wen-Jui Han, Robert Moffitt, and James Ziliak for providing data.

IRP publications (discussion papers, special reports, and the newsletter *Focus*) are available on the Internet. The IRP Web site can be accessed at the following address: http://www.ssc.wisc.edu/irp/

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

UD034020

BEST COPY AVAILABLE

Abstract

Although there is a large body of research devoted to the issue of the determinants of welfare caseloads, none of these studies has incorporated the effects of child support. Given that stronger child support enforcement is expected to reduce caseloads by deterring entrances and promoting exits from welfare and by deterring divorce and nonmarital births, this is a surprising and potentially serious omission. We employ annual state panel data from 1980 to 1996 first to replicate previous models and then to incorporate the effects of child support. We find support for the hypothesis that strong child support enforcement decreases welfare caseloads.

Child Support and Welfare Caseloads

I. INTRODUCTION

As a consequence of increasing rates of nonmarital births and divorces, the proportion of American families with children that are headed by single mothers rose sharply in the last quarter of the century. One of every eight families with children was headed by a single mother in 1970. By 1996, the proportion had doubled to one of every four. Unfortunately, the economic insecurity of single-mother families remains dangerously high. Nearly half are poor and another quarter are near-poor (below 200 percent of the poverty line) (U.S. House of Representatives, 1998).

The rising number of single-mother families and their persistent disadvantage have increased public and political concerns over the roles of welfare and child support. In response to the increase of divorced and never-married mothers in Aid to Families with Dependent Children (AFDC) caseloads, state and federal legislators have taken a number of steps to prevent nonresident fathers from abandoning their children financially and to increase the responsibility of resident mothers (see Garfinkel, Meyer, and McLanahan, 1998, for a brief history). In 1975, Congress created the Child Support Enforcement (CSE) Program, which established state offices of CSE and authorized federal matching funds for states to help locate absent parents, establish paternity, institute child support orders, and obtain child support payments. From 1981 through 1999, Congress passed new laws every year (with the exception of 1983, 1985, and 1991) strengthening child support (Lerman and Sorenson, 2000). The 1984, 1988, and 1996 bills were the most important. The 1984 Child Support Amendments required states to develop legislative guidelines for determining child support awards and to withhold child support obligations from the paychecks of delinquent fathers. In 1988, the Family Support Act mandated states to adopt presumptive guidelines for child support awards and to initiate automatic withholding from fathers' paychecks, regardless of delinquency. The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 reinforced paternity establishment by streamlining the legal processes for

BEST COPY AVAILABLE

establishment, requiring states to adopt in-hospital voluntary paternity establishment programs, and making genetic testing mandatory in contested cases. It also strengthened income withholding by reducing the time for employers to remit withheld wages to 7 business days and allowing issuance of electronic withholding orders by state agencies without notice to obligors. The collection system will change from one in which payment is often discretionary to one in which payment is compelled and automatic (Legler, 1996).

State and federal legislators also have passed a series of proposals designed to reduce the welfare eligibility of single mothers and increase the costs of single motherhood. These initiatives included a series of welfare waivers in the late 1980s and first half of the 1990s that lowered welfare benefits, imposed work requirements, and limited eligibility. This trend culminated in PRWORA, which replaced AFDC with Temporary Assistance for Needy Families (TANF), eliminated the entitlement to welfare, substantially tightened work requirements, and limited total lifetime eligibility to 5 years.

Large fluctuations in average monthly AFDC-Basic caseloads over the past 20 years have spawned a round of welfare caseload studies. The average monthly caseload was around 3.6 million between 1975 and 1981 and then, despite the severe recession in 1981–82, declined to 3.2 million in 1982. Most analysts attribute this drop to the reductions in welfare eligibility enacted by the 1981 Omnibus Budget Reconciliation Act (OBRA). Between 1982 and 1990 caseloads rose slowly but steadily to 3.8 million. In response to the recession of the early 1990s, caseloads increased from 3.8 million in 1990 to 4.6 million in 1994. After 1994, caseloads began an unprecedented decrease to 4.1 million in 1996 and 2.9 million as of the end of 1998. Numerous studies have found that the changes in demographics, macroeconomic conditions, political party, and AFDC program characteristics help to account for the changes over time (CBO, 1993; CEA, 1997; Ziliak et al., 1997; Blank, 1997; Moffitt, 1992, 1999; Wallace and Blank, 1999; Figlio and Ziliak, 1999).

What is missing from these studies of welfare caseloads is the effect of child support. Both reductions in welfare benefits and increases in child support will decrease welfare caseloads. Perhaps

BEST COPY AVAILABLE

because direct effects are more obvious and easier to document than are indirect effects, academic studies as well as the popular media have paid more attention to changes in welfare policies than to changes in child support policies in accounting for changes in welfare caseloads. For a number of reasons, this omission is both surprising and regrettable. First, policymakers strengthened child support enforcement in the belief that doing so would improve collections and thereby reduce welfare costs and caseloads. Second, there is evidence that child support enforcement has improved collections, especially among fathers whose children are likely to be on welfare. Third, as we show below, there are good reasons to expect, and fairly strong empirical evidence to support the belief, that strong child support enforcement will reduce welfare caseloads. Finally, cuts in welfare benefits and increases in child support payments both decrease welfare caseloads, but the former reduces the economic well-being of single-mother families while the latter increases it. Thus, previous studies of welfare caseloads are incomplete.

In this paper we test the hypothesis that strong child support collection is associated with lower welfare caseloads. Most of our models indicate that states with effective child support collection have significantly lower welfare caseloads, suggesting that future caseload studies should incorporate the effects of child support. In the next section, the theory and empirical evidence that motivate our analysis are discussed. In the third and fourth sections, we describe our analytical methods and data. After that, the effects of child support on welfare caseloads are presented. In the final section we discuss our results and their implications for policy and for future research.

II. THE MULTIPLE EFFECTS OF CHILD SUPPORT ON WELFARE CASELOADS: THEORY AND PREVIOUS LITERATURE

Simple descriptive statistics suggest that child support enforcement has been very successful in increasing child support payments from the fathers of children receiving welfare. From 1980 to 1996, according to data reported by the 50 state offices of child support enforcement and compiled by the federal Office of Child Support Enforcement (OCSE), the proportion of single mothers who were on

BEST COPY AVAILABLE

welfare and had a child support payment tripled—from 14 percent to 42 percent. Although the data we compiled from the March Current Population Surveys (CPS) differ, in those data too the proportion nearly tripled—from 9 percent to 26 percent. The differences in levels reported by the OCSE and CPS are important and will be discussed below, but they should not obscure the fact that both data sources indicate dramatic improvement over time. Nor should the very modest improvements in the payment rate for all children obscure the dramatic improvement for children on welfare. According to the CPS the proportion of all single mothers (both those receiving welfare and those not) receiving child support increased between 1980 and 1996 only from 28 percent to 35 percent. Though federal and state offices of child support enforcement in principle are supposed to serve welfare and nonwelfare cases, the focus of legislators and bureaucrats has been on welfare cases. Thus a much larger improvement for welfare cases is to be expected. Furthermore, as documented in Hanson et al. (1996), the child support enforcement system has been forced to swim upstream due to increases in the proportion of single mothers who are unwed and declines in real wages of nonresident fathers (see also Sorensen and Halpern, 1999). Unlike divorce and separation cases, unwed cases require that paternity be established before a child support order can be secured. Declines in real wages reduce nonresident fathers' ability to pay support. Finally, a number of academic studies document a link between specific child support enforcement laws and increases in child support payments (Garfinkel and Klawitter, 1990; Beller and Graham, 1993; Garfinkel and Robins, 1994; Freeman and Waldfogel, 1998; Sorensen and Halpern, 1999). In short, legislation to strengthen child support enforcement has succeeded in increasing child support payments from fathers of children on welfare.

Child support enforcement can decrease welfare caseloads both by reducing the proportion of single mothers who receive welfare and by reducing the prevalence of single mothers. Strong child support enforcement reduces the proportion of single mothers who will rely on welfare both by increasing the economic security of mothers outside welfare and by being more complementary to work. Increases in child support increase the mother's income and thereby reduce her need and eligibility for welfare.

BEST COPY AVAILABLE

Compared with welfare, child support is more complementary to work because as the mother's earnings increase, child support payments fall much less rapidly than welfare benefits, and in many states child support does not decline at all. A number of studies document that child support reduces poverty and welfare caseloads effectively (Robins and Dickinson, 1985; Robins, 1986; Garfinkel et al., 1990; Meyer et al., 1991). In terms of flows into and out of welfare, two studies (Meyer, 1993, and Huang, Kunz, and Garfinkel, 2000) using longitudinal data find that child support payments have significant effects on the probability of leaving AFDC and the probability of re-entering AFDC.

Though economic theory does not yield general conclusions about the effects of strong child support enforcement on nonmarital births or divorce, theory suggests that in the presence of a welfare system, deterrence effects are likely. Stronger enforcement increases the income of the custodial or resident parent and reduces the income of the nonresident parent. To simplify, yet account for most cases, we call resident parents mothers and nonresident parents fathers. If child support enforcement is tougher, mothers will be more prone to parent a child out of wedlock and to divorce, while fathers will be less prone to do either. Which effect will dominate cannot be ascertained in general, but Nixon (1997) shows that stronger enforcement is more likely to deter divorce among couples where the divorced wife would rely on welfare. And Willis (1999) finds that in the presence of a shortage of males and relatively high female income (which is produced by welfare), theory predicts that stronger enforcement reduces nonmarital births. One simple though not quite full story is that among couples where the mother would go on welfare if she had a nonmarital birth or divorced, welfare removes or at least reduces the benefit of strong enforcement. Consequently, the effects of enforcement on the incomes of these mothers and fathers is asymmetrical. In summary, previous explorations of economic theory predict that in conditions which pertain in the United States today, stronger child support enforcement will reduce nonmarital births and may reduce divorce. Further, there is empirical confirmation that stronger enforcement reduces marital disruption (Nixon, 1997) and out-of-wedlock childbearing (Case, 1998; Plotnick et al., 1998; Blau, Kahn, and Waldfogel, 1999; Garfinkel et al., 2000).

BEST COPY AVAILABLE

In short, theory strongly suggests and empirical research confirms that strong child support enforcement decreases welfare participation by increasing the income and economic security of single mothers, which decreases entries of single mothers into (and increases exits from) welfare, and by deterring single-motherhood via decreases in both nonmarital births and divorce. The total effect on welfare caseloads could be quite substantial even if each of the individual effects were only small to modest.

There is also a relatively large body of research devoted to predicting welfare participation and welfare caseloads (see Moffitt, 1992, Blank, 1997, and Figlio and Ziliak, 1999, for thorough reviews). In studies done in the 1980s, the focus was on the effects of welfare program characteristics on the participation decision. Although the data and methods are different, the results across the studies are remarkably consistent in showing that welfare participation is an economic decision. Higher caseloads are associated with higher welfare benefits, and also with higher unemployment rates, lower wages, and other sources of income (which include but are neither limited to nor dominated by child support). Women who are less educated, older, in poorer health, and with more and younger children are more likely to participate in welfare.

Welfare caseloads, as mentioned above, increased greatly in the early 1990s and then abruptly decreased after 1994 during a period when guarantees and tax rates did not change much. Not surprisingly, most studies in the 1990s shifted their focus to other matters, such as demographic, macroeconomic, political, and AFDC program factors. Among the factors, strong macroeconomic performance and welfare reform receive most credit for the changes. The Council of Economic Advisers (CEA, 1997) used annual state-level panel data for 1976–1996 and modeled per capita AFDC receipt—caseloads divided by state population—as a function of unemployment rates, welfare waivers, and AFDC maximum benefit guarantees. The CEA study concluded that 44 percent of the decline in welfare receipt from 1993 to 1996 could be attributed to economic growth and that 31 percent was related to welfare waivers. Results from an updated paper (CEA, 1999) indicate that PRWORA has been a key

BEST COPY AVAILABLE

contributor to the recent decline in caseloads. TANF accounts for one-third of caseload reduction from 1996 to 1998 while improvements in the labor market account for 8 to 10 percent. In the earlier years, 1993 to 1996, most of decline was due to the strong labor market while welfare waivers played a small yet important role. Building on Blank's work of 1997, Wallace and Blank (1999) used annual state data for 1980–1996 and a rich set of control variables to examine the changes in welfare participation. They found that caseloads are strongly affected by welfare waivers and by macroeconomic, programmatic, and political factors. In the 1994–1996 simulation, economic factors contributed 47 percent of caseload decline and welfare waivers accounted for 22 percent of the decline. Ziliak et al. (1997) argued that the use of annual caseloads masks the importance of short-run dynamics in caseload levels and employed monthly state-level data and a more dynamic specification to examine AFDC caseloads. They used 1987–1996 monthly data and attributed 78 percent of the decline to macroeconomic factors and only 6 percent to welfare waivers for the 26 states experiencing at least a 20 percent decline in AFDC caseloads between 1993 and 1996. Figlio and Ziliak (1999) conducted an extensive reconciliation between the findings in Ziliak et al. and those of the CEA, and concluded that these differences are largely due to the fact that the CEA used a static model while Ziliak et al. employed a dynamic one, and that the primary consequence of controlling for caseload dynamics is to reduce the role of welfare reform relative to the macroeconomic role in generating the decline in AFDC caseloads. In their preferred specification (model 6, Table 2), Figlio and Ziliak attributed 75 percent of 1993–1996 decline in caseloads to macroeconomic conditions, while the effect of welfare reform was negligible. Although the relative contributions of a strong economy and welfare reform are in dispute, the results across studies are consistent in that both factors underlie the decline in caseloads. However, in view of the strong theoretical and empirical evidence that child support matters, it is surprising that these studies do not incorporate the effects of changes in child support.

III. METHODS

The primary analysis technique is fixed effects regression of welfare caseloads with welfare caseloads as the dependent variable, and child support, demographic, economic, welfare, and political variables as independent variables. Fixed effects models are run as ordinary least squares (OLS) regressions with state and year binary variables as the fixed effects. The model specification uses the natural logarithm form and is given by:

$$\ln y_{it} = \alpha_i + \beta_1 * CS_{it} + \beta_2 * \chi_{it} + \delta_t + \varepsilon_{it} \quad (1)$$

where y_{it} is welfare caseloads measured for state i at time t, α_i is the individual state effect (which is taken to be constant over time), CS is a child support variable, χ is a vector of demographic, economic, welfare, and political variables, δ_t is the time effect (which is taken to be constant across states), β is a regression coefficient, and ε_{it} is the cross-sectional time-series error component. Note that with state and year effects, the only way in which a variable can influence the dependent variable is through its changes within a state over time. Variables that are largely constant over time within states or affect all states in a given year, such as the Earned Income Tax Credit (EITC), will be subsumed within the state and year fixed effect.

In some models, we also control for state-specific time trends (i.e., the interaction of state dummies and the linear time-trend variables). With state-specific time trends included, the only way an independent variable (such as child support) can influence the dependent variable is through its deviation from linear time trends in the state. Including state-specific time trends may introduce the problem of "overcontrolling" for variables which trend up or down in a linear fashion (Blank, 1997). As with some previous analyses of welfare caseloads, we also estimate dynamic versions of model 1 by including lagged welfare caseloads as an independent variable.

BEST COPY AVAILABLE

The coefficient β_1 in equation 1 may be biased if child support is endogenous.[1] States with high caseloads have a greater incentive to enforce child support. Consequently, the error term of equation 1 is correlated with child support collections, and OLS generates positively biased coefficients (Greene, 1993). To correct for this potential endogeneity, we remodel our equation as two-stage equations (2SLS):

$$CS_{it} = \alpha_i + \gamma_1 * Z_{it} + \gamma_2 * \chi_{it} + \delta_t + \nu_{it} \quad (2\text{-}1)$$

$$\ln y_{it} = \alpha_i + \beta_1 * p(CS)_{it} + \beta_2 * \chi_{it} + \delta_t + \varepsilon_{it} \quad (2\text{-}2)$$

where Z is the vector of instrumental variables and p(CS) is the predicted child support value. Specifically, in the first stage, the endogenous variable, child support, is regressed on a set of instruments and all the exogenous variables in order to get predicted values. The predicted CS is then used in the second stage. Because the predicted CS is not correlated with the error term, ε_{it}, it generates consistent and efficient coefficients in the second stage, equation 2-2. As discussed in further detail below, we use the ratio of the legislature that is female as an instrument. The female legislator ratio has been shown to be an appropriate instrument for state child support policies which in turn affect child support enforcement (Besley and Case, 1997; Case, 1998).

One difficulty with using the female legislator ratio is that it is reasonable to hypothesize that female legislators also affect other government programs, such as the generosity of welfare and child care, which affect welfare caseloads. Though we control for welfare benefit levels, good measures of state child care expenditures over the entire period are not available, and there may be other omitted variables that are positively associated with female legislators and negatively associated with welfare caseloads. Thus, the predicted child support coefficient may overestimate the effect of child support on caseloads. Consequently, the 2SLS estimates should be considered an upper bound estimate of the effects of child support enforcement on welfare caseloads.

---

[1] As in other studies on this topic, we treat welfare benefit levels as exogenous in these models. We did test for the exogeneity of welfare benefits using state political variables and the federal match rate as instruments, but for the most part the results suggested that welfare could be treated as exogenous in models with state-specific time trends, while in models without state-specific time trends, our instruments performed poorly.

To measure the strength of a state's child support enforcement program, we calculate the average child support payment per eligible family on welfare and the proportion of eligible families that receive child support for each state each year, or payment rate. The average payment is the most comprehensive measure of the strength of a state's child support enforcement system because it captures the effects of (1) the probability of establishing a legal child support obligation, (2) the dollar value of the obligation, and (3) the degree to which the obligation is paid. Though average payments also inappropriately capture differences in men's earnings across states, this is not a problem for our analysis because we control for differences in male earnings. As described below, however, reliable data on average payments are available only for families that receive welfare. By way of contrast, there are reliable data on the proportions of eligible families that receive some child support both for all single mothers and for only mothers who received welfare. The payment rate, while not quite as comprehensive as average payments, is still a very good measure of the strength of a state's enforcement system because it reflects success at both getting a child support award and securing a payment. From a theoretical perspective, it is not clear whether the effectiveness of child support enforcement for all single mothers or only for single mothers on welfare is the more important determinant of welfare caseloads. Thus, we try both measures. Other measures of enforcement strength could be used. Nixon (1997), for example, used average payments and three other measures besides the payment rate in her analysis of the effects of enforcement on divorce. But she notes that the correlation between these five variables was .8 and found not surprisingly that the results for all variables were quite similar.

Alternatively, the effects of child support laws or expenditures could be examined. Case (1998), for example, analyzes the effects of a few child support laws (rather than practices) on nonmarital births, and Freeman and Waldfogel (1998) examine the effects of the number of key state laws enacted and expenditures on child support enforcement. Sorensen and Halpern (1999) investigate the effects of several child support enforcement laws on child support receipt rate. We examine the effects of child support outcomes or practices rather than laws or expenditures for two reasons. First, measuring the effects of

BEST COPY AVAILABLE

individual laws is quite difficult, and the correct specification is unclear because child support payments are a multiplicative function of the probability of having a legal obligation, the level of the obligation, and the probability of paying the full obligation. Furthermore, each step in the enforcement process is affected by more than one law. The probability of securing a child support obligation, for example, depends on a number of laws, such as (1) admitting, and more recently requiring, blood and genetic tests in disputed cases, (2) allowing paternity to be established any time before the child's 18th birthday, and (3) requiring that paternity be established for the father's name to go on the birth certificate. Second, effective practices are derived in part, but not in whole, from laws. Good laws that are not effectively enforced may have little effect. Freeman and Waldfogel (1998) show that effective child support enforcement requires both strong laws and high expenditures on enforcement. Thus, it seems reasonable to hypothesize that welfare caseloads will be more strongly related to effective enforcement practices than to laws per se.[2] Using measures of child support payments has advantages, but there are disadvantages as well. Most important, not all of the effects of child support laws on welfare caseloads operate indirectly through their effects on child support payments. For example, laws that strengthen the requirements for mothers receiving AFDC/TANF to cooperate with OCSE officials in establishing paternity and enforcing support could deter mothers from applying for welfare even if the law had no effect on child support payments. Similarly, laws strengthening paternity establishment could affect fathers' marriage and fertility behavior rather than payment behavior. To the extent that child support enforcement laws have these kinds of direct effects on welfare caseloads independent of their indirect effects through payments, as above, the coefficient β_1 in equation 1 will underestimate the true effect of strong child support enforcement on welfare caseloads.

---

[2]As a practical matter, a time series of data on laws and expenditures that would cover the entire period we are interested in in this paper is not readily available. Freeman and Waldfogel had to restrict their analysis of laws and expenditures to the 1981–1988 period only. Sorensen and Halpern cover a longer period, but their data are not publicly available. Because we want to understand whether the omission of child support has biased previous studies of welfare caseloads and because the reforms occurred in the mid-1990s, it is important that we have data that cover this period.

IV. DATA

The data for this study came from several sources. In previous studies, welfare caseloads have been defined as AFDC-Basic caseloads divided by the state population or by the female population aged 15–44. Although both measures adjust for state size, the latter is preferred because it takes account of the size of the population at risk in that state, and therefore we follow it here.[3] AFDC-Basic caseloads from 1980 to 1996 come from Quarterly Public Assistance Statistics (QPAS). State female population aged 15–44 comes from 1980–1996 CPS.

As discussed above, the key independent variable, the strength of the state's child support enforcement system, is measured alternatively as (1) the average child support payment for families on welfare, (2) the payment rate for families on welfare, and (3) the payment rate for all single-parent families. The data for these child support variables come from three different sources. We use the average child support payment to AFDC cases and the number of AFDC cases with child support payments as reported by the OCSE divided by the number of AFDC-Basic caseloads from QPAS to measure, respectively, the average payment for families on welfare and the proportion of single mothers on welfare with child support payments. The OCSE data are not reliable for tracking payments to all families eligible for child support. Federal child support law requires state offices of child support enforcement to provide services to all welfare families and to offer to provide services to nonwelfare families. States differ in the extent to which they incorporate nonwelfare cases into their administrative systems. Over time, however, virtually all states have brought an increasing proportion of all eligible families into their state OCSE systems. Thus a large part of the difference between states and over time in OCSE collections for nonwelfare families is a result of counting more families in one state than another and over time where

---

[3]Both measures have been analyzed and the results are robust. We also follow Blank (1997) in using AFDC-Basic caseloads minus child-only caseloads as an alternative numerator for the dependent variable, and the results are similar to those using AFDC-Basic caseloads.

BEST COPY AVAILABLE

child support was already being paid. Consequently we do not use the OCSE data to measure payments to all eligible families. Instead, we use the March CPS from 1979 to 1997 to construct state-by-year measures of both the percentage of single mothers with child support payments and the percentage of single mothers on welfare with child support payments. We do not use the CPS data to construct measures of payment amounts because, although the CPS collected data on whether any child support was received by 1980, data on the amount of child support received was not broken out from other sources until 1989.

The major weaknesses of the CPS measures are the small sample size of single mothers in many states and the problem of underreporting of welfare receipt. Sample sizes are smallest and sampling error greatest for the proportion of welfare cases receiving child support. The underreporting of welfare receipt in the CPS is a well-known problem that leads to difficulty in accurately identifying people receiving welfare. In addition welfare recipients may underreport receipt of child support because they receive at most $50 per month in child support and the payment comes not as a separate check but as an addition to their welfare check. On the other hand, the OCSE administrative data are subject to various kinds of reporting error (Guyer, Miller, and Garfinkel, 1996). Most important, for the AFDC payment rate, it is possible that states report payments to former welfare cases as payments to welfare cases. Though the data-matching capabilities of state offices of welfare and child support enforcement have improved over time, this type of error is still likely to occur, especially since federal law gives state offices of child support greater incentives for collecting from AFDC than non-AFDC cases. Because the OCSE-based measure is not subject to sampling error, we have more confidence in it for the state-by-year analyses. We are less confident that it is superior to the CPS in measuring the absolute level of the national proportion of welfare cases with payments in any particular year. Which is the better measure of the national level would make a good statistical note and be of use to policymakers, but is beyond the scope of this study. Finally, to reduce the impact of sampling and reporting error, we use 3-year moving averages for all three measures of child support enforcement rigor.

BEST COPY AVAILABLE

For welfare variables, AFDC maximum benefits for a four-person family were collected from the *Green Book* (U.S. House of Representatives, Committee on Ways and Means, various years). Average Medicaid expenditures for a family with one adult and two children came from Blank (1997), who obtained them from the Health Care Financing Administration. The welfare waivers used in this study include the approval dates of any major waivers that (1) require work, (2) impose time limits on benefits, or (3) provide work incentives. Data for these variables came from Ziliak et al. (1997). We created a dummy variable to indicate whether a state had at least one major waiver (related to work, time limits, or work incentives) approved by federal government by the survey year.

Information on state-level demographics came mainly from the Census Bureau and the CPS. Values for the intercensal years were interpolated from 1980 and 1990 censuses, and values for 1991 through 1996 were updated by 1991 and 1996 CPS. Demographic data include the percentage of the population that is black, the percentage that is elderly, and the percentage with less than high school education. The number of newly arrived immigrants is available from 1980 to 1995 from the *Statistical Yearbook* of the U.S. Immigration and Naturalization Services. Male and female 10th percentile and median wages were computed from the CPS. Unemployment rates were taken from the Census Bureau's *Statistical Abstract of the United States*.

Political variables include the party affiliation of the governor, the majority party of the state House and state Senate, and the female legislator ratio (i.e., the number of female legislators in the state House and Senate divided by total number of legislators), obtained from *The Book of States*, published by the Council of State Governments.

We use annual data because our CPS figures and some aggregate data are only available at the annual level. Data were complete for every variable for each state and year. The final sample consists of 867 observations—50 states plus the District of Columbia for 17 years, 1980 through 1996. Variables expressed in dollars were collected as nominal amounts and converted to real (constant) 1996 dollars using the consumer price index.

V. RESULTS

Descriptive Results

Means and standard deviations of the main analysis variables are listed in Table 1; Table A1 provides the same information for the other analysis variables. In 1980, the mean welfare caseload rate—a state's welfare caseload divided by its female population aged 15–44—was 6.3 percent, with a standard deviation of 2.5 suggesting substantial variation across states. This proportion dips to about 5.5 percent in 1984 and 1988, increases in response to the recession in the early 1990s to 6.8 percent in 1992, and falls back to 6.2 percent in 1996. The rate is affected both by the proportion of females who are single mothers and by the proportion of single mothers who participate in welfare, and the trends in these variables are quite different. The proportion of females who are single mothers increases steadily, but at a decreasing rate, from 11.6 percent in 1980, to 13.7 percent in 1984, 14.2 percent in 1988, 15.1 percent in 1992, and 16.3 percent in 1996. By way of contrast, the proportion of single mothers who receive welfare declines over the period, except for periods of recession—from 54 percent in 1980 to 40 percent in 1984, 39 percent in 1988, back up to 45 percent in 1992, and then back down to 38 percent in 1996. Finally, the proportion of single mothers with child support payments is 28 percent in 1980, dips to 27 percent in 1984, and then increases steadily to 31 percent in 1988, 32 percent in 1992, and 35 percent in 1996. As described above, even more striking is the increase between 1980 and 1996 in the proportion of single mothers on welfare who receive child support. The proportion, derived from CPS data, increased from 8.8 percent to 26.2 percent; based on OCSE data, the proportion increased even more, from 14.7 percent to 42.3 percent. The increase in average payments for families on welfare is impressive as well, from $346 in 1980 to $811 in 1996. As discussed above, the improvement in child support enforcement for single mothers on welfare is clear.

The time trends in Table 1 are consistent with the hypothesis that improvements in child support enforcement have led to decreases in welfare caseloads by reducing the rate of growth of single

TABLE 1
Means and Standard Deviations of Main Variables

Variable	1980–96	1980	1984	1988	1992	1996
Welfare Caseloads / Female Population Aged 15–44	6.01	6.32	5.51	5.45	6.78	6.18
	(2.12)	(2.53)	(2.04)	(1.80)	(1.93)	(2.19)
Single Mothers / Female Population Aged 15–44	14.30	11.58	13.74	14.19	15.11	16.31
	(3.28)	(2.39)	(2.68)	(3.19)	(3.12)	(3.71)
Welfare Caseloads / Single Mothers	42.33	54.15	39.87	38.71	45.30	38.24
	(11.97)	(15.97)	(10.94)	(10.48)	(10.52)	(10.70)
CPS Payment Rate for All Single-Mother Families [a]	30.21	27.57	26.64	30.68	31.59	34.54
	(7.78)	(7.17)	(6.04)	(8.49)	(7.89)	(8.59)
CPS Payment Rate for Families on Welfare [b]	16.57	8.81	8.46	18.50	19.47	26.23
	(10.49)	(6.43)	(4.94)	(10.65)	(7.79)	(13.17)
OCSE Payment Rate for Families on Welfare [c]	27.04	14.66	21.31	27.79	31.00	42.32
	(15.26)	(8.23)	(11.02)	(12.56)	(14.32)	(20.66)
OCSE Average Payment for Families on Welfare [d]	0.596	0.346	0.500	0.638	0.679	0.811
	(0.314)	(0.228)	(0.266)	(0.293)	(0.284)	(0.354)

Notes: Unit is state. Standard errors are in parentheses.

[a]Number of single-mother families with child support payments divided by number of single-mother families, both from CPS.

[b]Number of single-mother families on welfare with child support payments divided by number of single-mother families on welfare, both from CPS.

[c]OCSE-reported AFDC cases with child support payments divided by administrative caseloads data.

[d]OCSE-reported total child support collection amount from AFDC cases divided by administrative caseloads data. $1,000 real 1996 dollars.

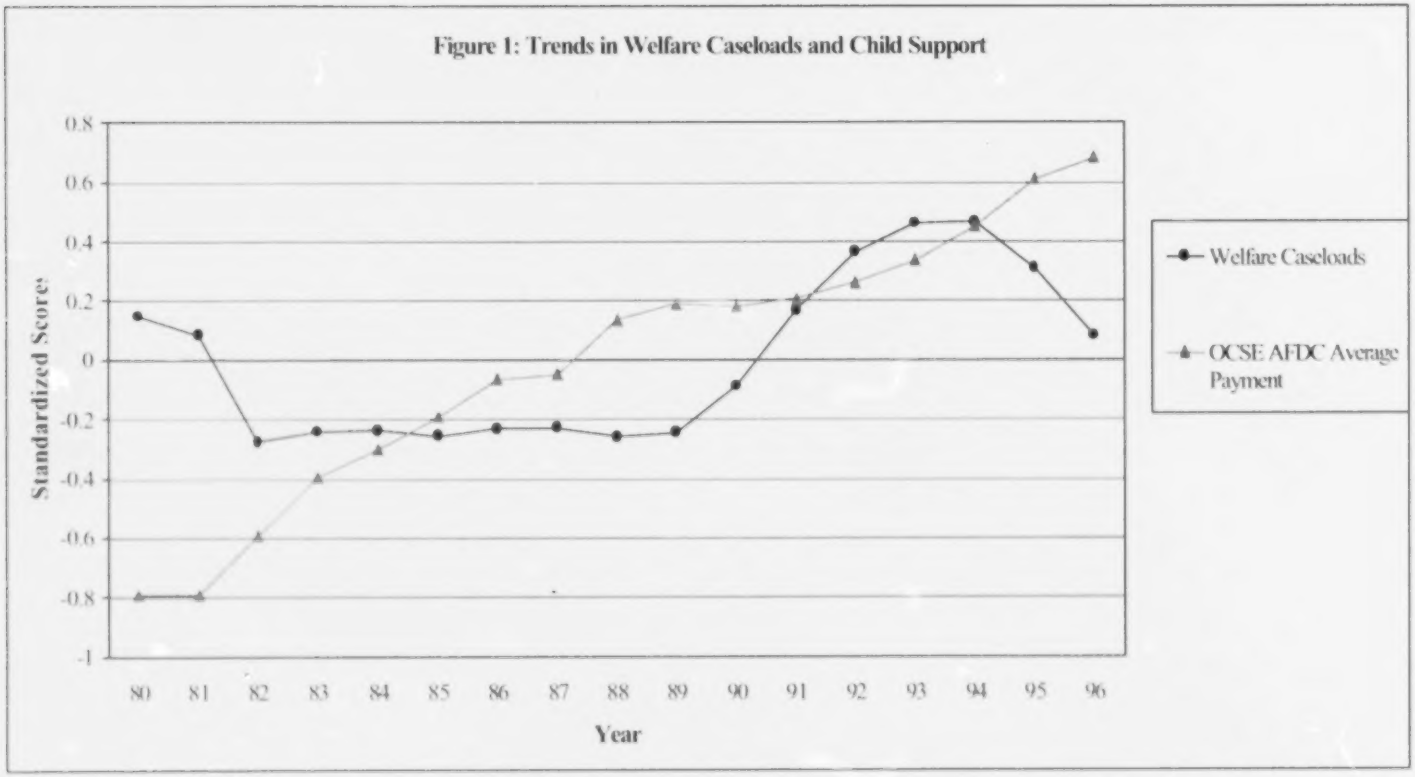
motherhood and by providing an alternative source of support to single mothers. Figures 1, 2, and 3 explore further the relationship between child support and welfare caseloads over time and across states. Figure 1 displays the aggregate trends in welfare caseloads and the OCSE-based measure of average payment for families on welfare. Welfare caseloads declined in the early 1980s, remained stable between 1982 and 1989, increased again in the early 1990s, and began an unprecedented decrease after 1994. On the other hand, the OCSE average payment measure shows substantial increase over the period, as do the other three measures of child support. Figures 2-1 to 2-4 present the relationship between welfare caseloads and the four measures of child support over time and across states. The negative relationship between welfare caseloads and child support is evident from the figures, with correlation coefficients ranging from -.20 to -.51. Figure 3 displays the relationship between percentage changes in the OCSE-based measure of average payments for families on welfare and the changes in welfare caseloads levels (r = -.31). The relationship is also strong for OCSE payment rate for families on welfare (r = -.45) (although perhaps due to sampling error, there is virtually no relationship between the changes in the CPS-based measures and the changes in welfare caseloads). The relationship between the OCSE measures and welfare caseloads is even stronger in the later period. The correlation coefficient, for example, between percentage changes in the OCSE-based measure of average payments and welfare caseloads in the 1993–1996 period is -.50. We use multivariate analyses to explore these relationships further in the next section.

OLS Regression Results

Table 2 presents the estimated coefficients for the 1980–1996 period from OLS regressions. Model 1 basically replicates Blank's (1997) model and therefore child support is not included.[4] Our

[4]The differences between Blank's model and our model are (1) the percentage of households headed by single mothers is not included because female headship may be endogenous to, or influenced by, both AFDC benefit levels and, more important for our purposes, child support enforcement, (2) gender is taken into account in wage variables and we use 10th rather than 20th wage percentile, and (3) the proportion of people with less than a high school education is used rather than years of education in Blank's model.

Figure 1: Trends in Welfare Caseloads and Child Support



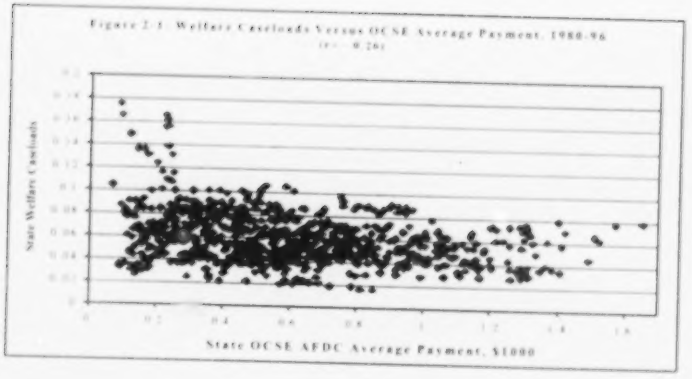


Figure 2-1: Welfare Caseloads Versus OCSE Average Payment, 1980-96
(r= - 0.26)

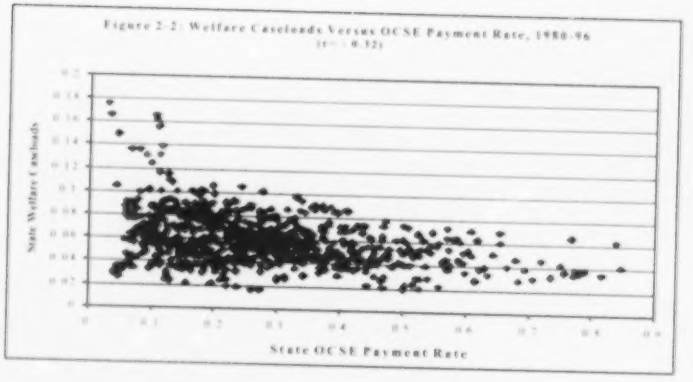


Figure 2-2: Welfare Caseloads Versus OCSE Payment Rate, 1980-96
(r= - 0.52)

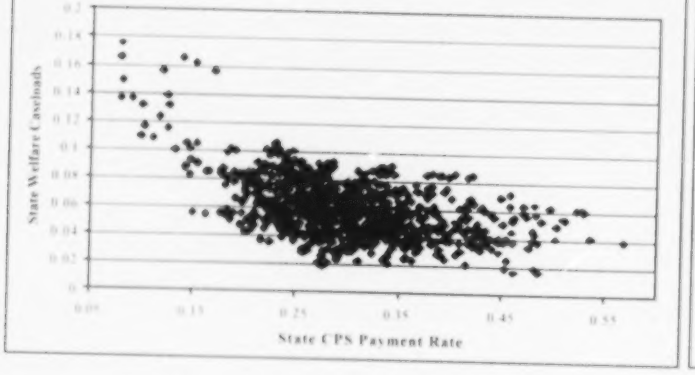


Figure 2-3: Welfare Caseloads Versus CPS Payment Rate, 1980-96
(r= - 0.51)

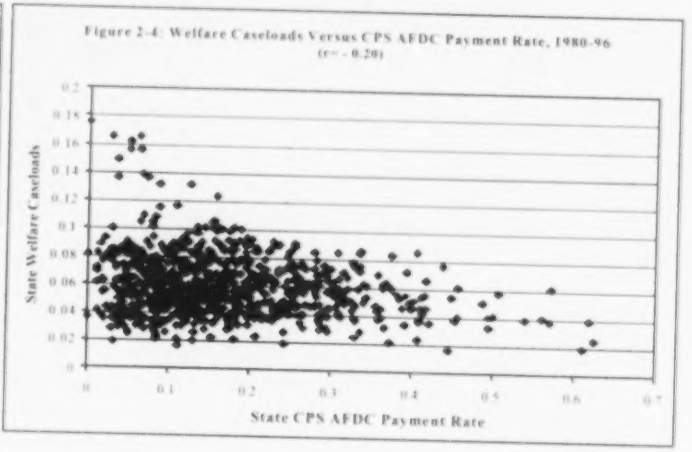


Figure 2-4: Welfare Caseloads Versus CPS AFDC Payment Rate, 1980-96
(r= - 0.20)

BEST COPY AVAILABLE

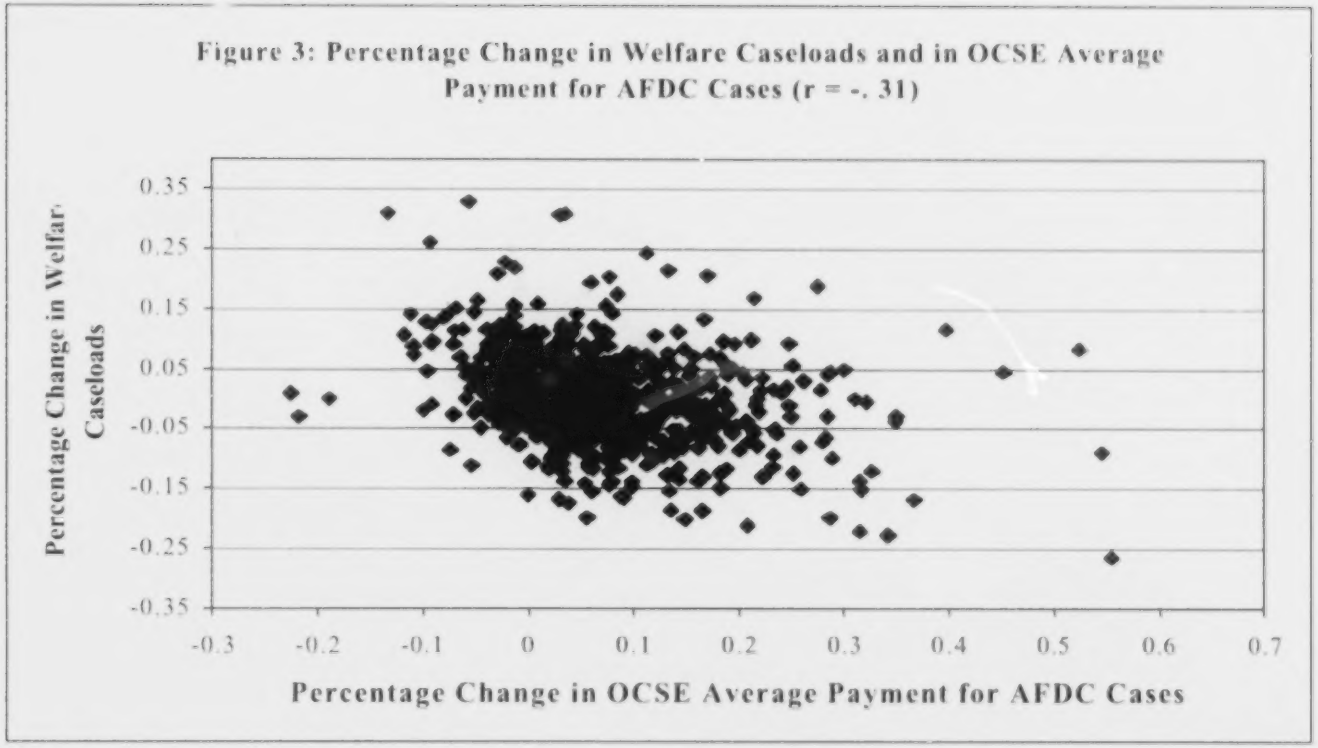


Figure 3: Percentage Change in Welfare Caseloads and in OCSE Average Payment for AFDC Cases (r = -. 31)
Percentage Change in Welfare Caseloads
0.35
0.25
0.15
0.05
-0.05
-0.15
-0.25
-0.35
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
Percentage Change in OCSE Average Payment for AFDC Cases

TABLE 2

OLS Welfare Caseloads Models with and without Child Support, 1980–1996

Dependent Variable: Log (Administrative AFDC-Basic Caseload/Female Population Aged 15

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
		Robust			Robust			Robust			Robust			Robust			Robust		
Variable	Coef.	S.E.	P	Coef.	S.E.	P	Coef.	S.E.	P	Coef.	S.E.	P	Coef.	S.E.	P	Coef.	S.E.	P
Welfare Caseloads, t-1													0.892	0.017	***	0.792	0.027	***
OCSE Average Payment for Families on Welfare							-0.272	0.045	***	-0.398	0.056	***	-0.064	0.023	***	-0.167	0.032	***
Unemployment Rate	1.406	0.537	***	1.784	0.354	***	1.410	0.528	***	1.373	0.339	***	1.243	0.222	***	1.283	0.223	***
Unemployment Rate, t-1	1.358	0.587	**	1.351	0.389	***	1.207	0.572	**	0.989	0.357	***	0.272	0.235		0.364	0.233	
Unemployment Rate, t-2	2.680	0.482	***	1.705	0.323	***	2.405	0.458	***	1.445	0.299	***	-0.069	0.182		0.108	0.174	
Log (Male 10th Wage Percentile) [$ real 1996]	-0.035	0.036		-0.120	0.042	***	0.006	0.055		-0.118	0.040	***	-0.008	0.022		-0.031	0.022	
Log (Female 10th Wage Percentile) [$ real 1996]	-0.163	0.068	**	-0.138	0.044	***	-0.148	0.067	**	-0.134	0.042	***	-0.005	0.026		-0.020	0.026	
Log (Male Median Wage) [$ real 1996]	-0.291	0.091	***	-0.080	0.070		-0.311	0.090	***	-0.072	0.069		0.002	0.034		0.034	0.038	
Log (Female Median Wage) [$ real 1996]	-0.321	0.105	***	-0.021	0.077		-0.420	0.101	***	-0.032	0.074		-0.033	0.036		0.016	0.036	
Log (Yearly Maximum AFDC Benefit Level [$ real 19	0.337	0.073	***	0.187	0.058	***	0.337	0.066	***	0.152	0.057	***	0.233	0.026	***	0.193	0.033	***
Log (Yearly Medicaid benefit Level [$ real 1996])	0.013	0.017		-0.001	0.013		0.024	0.014	*	0.005	0.012		-0.007	0.005		0.002	0.005	
Any Major Waiver	-0.081	0.023	***	-0.055	0.014	***	-0.080	0.022	***	-0.047	0.013	***	-0.015	0.007	**	-0.005	0.007	
Republican Governor	-0.053	0.010	***	-0.034	0.007	***	-0.056	0.009	***	-0.033	0.007	***	-0.017	0.004	***	-0.012	0.004	***
Both Major Party in State Senate and House is Reput	-0.028	0.019		-0.023	0.014		-0.037	0.019	*	-0.026	0.014	*	-0.006	0.008		-0.009	0.008	
Both Major Party in State Senate and House is Demo	0.007	0.019		0.013	0.011		0.013	0.018		0.006	0.010		0.000	0.006		0.001	0.006	
Percent Elderly	-0.247	0.559		0.884	1.498		-0.676	0.572		0.664	1.366		-0.770	0.215	***	-0.414	0.758	
Percent Black	-0.849	0.722		1.479	1.444		-0.756	0.794		1.136	1.364		-1.004	0.303	***	-1.124	0.688	
Percent with Less Than High School Education	1.338	0.364	***	0.496	0.325		1.306	0.356	***	0.499	0.296	*	0.131	0.116		0.191	0.155	
Percent Immigrants, ...	-0.976	4.353		-1.788	2.700		-2.046	4.159		-1.965	2.611		0.875	1.771		0.451	1.651	
Percent Immigrants, ...	1.037	4.962		-2.035	2.884		-0.700	4.759		-0.179	2.944		-1.509	1.415		-0.412	1.456	
State and Year Effects		Yes			Yes			Yes			Yes			Yes			Yes	
State Time Trends		No			Yes			No			Yes			No			Yes	
R^2		0.911			0.966			0.916			0.969			0.989			0.991	

* significant at 10 percent level; ** significant at 5 percent level; *** significant at the 1 percent level.

BEST COPY AVAILABLE

results for model 1 are similar to Blank's. Unemployment has a strong and long-term effect on caseloads. A 1 percent increase in the unemployment rate in the current year would raise the caseload share by 1.4 percent in the current year, another 1.4 percent in the next year, and 2.7 percent in the second following year. The total effect of a 1 percentage point increase in unemployment rate on caseloads would be 5.5 percent. This number is in the middle of previous estimates—higher than Blank's 3.8 percent (1997, Table 2, column 1), Ziliak's 4.1 percent (1997, Table 5, column 1), and CEA's 4.7 percent (1997, Table 2, column 1), but lower than Wallace and Blank's 6.0 percent (1999, Table 2, column 2). The difference may due to data period and/or model specification.

As expected, better employment prospects as measured by the male and female 10th percentile and median wages reduce welfare caseloads. A 10 percent increase in the female 10th percentile wage (an increase of around 49 cents) would lead to a 1.6 percent decrease in caseloads, and a 10 percent increase in the male and female median wage (increases of around $1.5 and $1, respectively) would reduce caseloads by 2.9 and 3.2 percent, respectively. This result makes sense since an increase in the wage for a low-income woman has a direct effect on her income, which decreases her probability of being on welfare; an increase in the male median wage raises a man's marriage prospects, which indirectly reduces caseloads by increasing marriage.

States with more generous benefits have higher welfare caseloads. A 1 percent increase in AFDC benefits will increase caseloads by 0.34 percent. Having a welfare waiver, however, significantly reduces caseloads. States with any major welfare waiver reduce their caseloads by 8.1 percent. The magnitude of welfare waivers is at the low end of previous estimates—similar to Wallace and Blank's estimate (1999, Table 2, column 2), but lower than Blank's 10.7 percent (1997, Table 2, column 1), Ziliak's 9.1 percent (1997, Table 5, column 1), and CEA's 9.4 percent (1997, Table 2, column 1).

Political variables matter, too. Having a Republican governor and having both state legislative chambers controlled by Republicans substantially reduces caseloads by 5.3 and 2.8 percent, respectively. These findings suggest that Republican governors and legislators are able to shape administrative

BEST COPY AVAILABLE

processes to lower caseloads. Finally, for demographic variables, proportions of the population with less than a high school education are significantly and positively associated with caseloads.

Model 2 is the same as model 1 except for the addition of state-specific time trends. As expected, including state time trends reduces the magnitude of most of the estimated coefficients. An exception is the male 10th percentile wage, which becomes significant, while the effect of the female 10th percentile wage still holds, and both male and female median wages become insignificant. The magnitude of the AFDC benefits coefficient is reduced by half but is still significant.

Models 3 and 4 are the same as models 1 and 2 except that our best measure of the main independent variable, the average payment for families on welfare as reported by OCSE, is added. (The results for the other three measures of child support are reported in Table 3.) The child support coefficients are negative and significantly different from zero in the models both with and without state-specific time trends. A $100 dollar increase in child support payments would reduce caseloads by 0.27 percent in model 3 and by 0.40 percent in model 4.[5] Including state child support collection does not notably change the findings from models 1 and 2. All the variables that were significant in models 1 and 2 still hold their significance in models 3 and 4. This suggests that models that omit child support collection may not yield greatly biased coefficients. (We explore this issue in more detail below.)

Models 5 and 6 are identical to models 3 and 4, respectively, except that the lagged value of welfare caseloads is included as an independent variable. The most notable result is that both child support coefficients remain significantly different from zero, but decline significantly. Also, the child support coefficients are larger when state-specific time trends are included. The effect of welfare waivers

[5]Some may argue that part of the child support effect reflects the different proportions of never-married mothers across states because states with more never-married mothers might have higher caseloads and fewer child support collections. Because the proportion of never-married mothers is endogenous to our main model, we do not include it in our models. However, the coefficient of child support increases, rather than decreases, to −.29 in model 3 and to −.40 in model 4 after controlling for the proportion of never-married mothers. We think this is because the effect of never-married mothers on caseloads (r=.53) is much stronger than on child support (r= −.23), which leads to the estimated coefficient of child support being positively biased.

also decreases substantially and is no longer significant in model 6. The lagged values of unemployment rates are no longer significant as well.

Table 3 presents OLS child support coefficients for alternative measures of child support from models 3, 4, 5, and 6 in Table 2. In addition to the OCSE-based measure of average payments per welfare family, results are presented for the other three measures of the strength of the state's child support enforcement regime: the OCSE-based measure of payment rates for welfare families and the CPS-based measures of payment rates for welfare families and for all single-mother families. All of the OCSE-based measures are negative and significantly different from zero. The CPS-based measures, by contrast, are weaker. Though both are negative and significantly different from zero in model 3, neither is significantly different from zero in any of the other models and even have the wrong sign in the models with lagged caseloads. The weaker results for the CPS-based measures are consistent with the hypothesis that these variables are measured with more error.

2SLS Regression Results

As discussed above, child support payments may be endogenous to welfare participation. In particular, child support enforcement is expected to have a negative effect on caseloads, but states with higher caseloads might have a greater incentive to enforce child support. If states with higher caseloads do devote more effort to enforcement, this will introduce a positive association between enforcement and caseloads, or a positive bias in the child support collection coefficient. To test this, we use the proportion of female state legislators and that number squared as the instrument for child support. Three-year lags are used for the proportion of female legislators to capture the time difference between legislation and implementation. The first stage of 2SLS for the CPS child support payment rate is displayed in Table A2. In models both with and without state time trends, the square of the female legislator ratio is significantly positive and has a much stronger effect than the female legislator ratio has on the proportion of single mothers with child support payments. The findings suggest that the presence of women in state

TABLE 3
Child Support Coefficients from OLS Welfare Caseloads Models

Variable	Model 3		Model 4		Model 5		Model 6	
	Coef.	P	Coef.	P	Coef.	P	Coef.	P
OCSE Average Payment for Families on Welfare	-0.272	***	-0.398	***	-0.064	***	-0.167	***
	(0.045)		(0.056)		(0.023)		(0.032)	
OCSE Payment Rate for Families on Welfare	-0.321	***	-0.335	***	-0.064	**	-0.162	***
	(0.062)		(0.079)		(0.026)		(0.043)	
CPS Payment Rate for All Single-Mother Families	-0.471	***	-0.034		-0.041		0.024	
	(0.088)		(0.077)		(0.033)		(0.038)	
CPS Payment Rate for Families on Welfare	-0.212	***	-0.037		0.013		0.030	
	(0.065)		(0.054)		(0.026)		(0.028)	

Note: Robust standard errors are in parentheses.
* significant at 10 percent level; ** significant at 5 percent level; *** significant at the 1 percent level.

legislatures has a positive effect on state child support policy, and the effect increases more than proportionally as the proportion of female legislators increases. (The results remain significant, but are a bit weaker, if we exclude the squared term.)

In results not presented in tables, we found that the proportion of female state legislators is positively and significantly (at the .05 level) related to all four measures of child support in models without state time trends and to both CPS-based measures in models with state time trends. The female state legislator coefficients are positive but significant at only the .07 and .22 levels for the OCSE-based payments amount and payment rates measures in models with state time trends. Bound, Jaeger, and Baker (1995) indicate that if the instrument is only weakly correlated with the endogenous variable, even a small correlation between the instrument and the error term in the second stage can seriously bias estimates. The correlation between the female legislator ratio (t−3) and our four child support measures ranges from .41 to .50 ($p < .001$), and the correlation between female legislator ratio (t−3) and error terms in the second equations are near zero, ranging from .003 to .01. This suggests that the female legislator ratio (t−3) is a good candidate for an instrument. Still, as suggested above, omitted variables bias may produce upwardly biased estimates.

Finally, we employ two tests of whether child support enforcement is endogenous. In the first test, we regress caseloads against our observed child support measures and the error terms from the first stage regressions. The error terms are significantly related to caseloads when the CPS-based, but not the OCSE-based, measures of enforcement are used. All the error terms are in the positive direction except OCSE average payments per welfare family. The relationship between the error terms and caseloads provides some evidence that child support payment rates carry positive bias. The second test is a Hausman (1978) test to examine whether the coefficients between OLS and 2SLS are significantly different. This test provides evidence of endogeneity for all three measures of payment rate, but not for the OCSE-based measure of average payments for families on welfare.

BEST COPY AVAILABLE

The top panel of Table 4 presents the child support coefficients from the second stage of 2SLS estimates for the four alternative measures of the strength of child support and the four different models; the comparable OLS coefficients from Table 3 are presented in the bottom panel. As is the case with many instrumental variables models, the standard errors are large, and only four of the 16 coefficients are statistically significant. The most noteworthy result in Table 4 is that all of the 2SLS child support coefficients are negative and, with two exceptions, all are larger in absolute magnitude than the OLS coefficients.[6] Although for the most part they are not statistically significant, these results suggest that states with higher caseloads have done more to enforce child support or that the 2SLS coefficients are upwardly biased because of an omitted variables problem. Not surprisingly in view of the endogeneity test described above, the coefficients of the CPS-based measures increase the most. For similar reasons, it is also not surprising that the OCSE measure of average payments to welfare mothers changes the least. Given the conceptual superiority of the OCSE average payment measure, the absence of sampling error with this variable, the results of the tests of endogeneity, and the results reported in Tables 3 and 4, we place the most confidence in the OLS results for this variable. Finally, the OCSE average payment measure, taken in conjunction with the change in this measure over the 1980–1996 period, suggests that increases in child support enforcement led to reductions in AFDC caseloads in 1996 by 12 to 17 percent.

Simulations of the Relative Importance of Child Support Enforcement

To test of the importance of child support in explaining recent caseload declines, we used the results from models 1 and 2 in Table 2 to simulate the effects of improvements in unemployment rates and welfare waivers on caseload changes between 1994 and 1996. These results replicate previous

---

[6]The 2SLS child support coefficients generally decrease if we only use a single instrument—female legislator ratio—but the coefficients increase in some models. For example, the 2SLS coefficient of CPS payment rate for welfare mothers decreases from -0.66 to -0.20 in model 3, and from -0.18 to -0.04 in model 5, but the coefficients increase from -.058 to -1.85 in model 4 and from -.10 to -2.02 in model 6. We prefer models that include the square of female legislator ratio as an instrument because the female legislator ratio may not work in a linear way and because it fits the data better.

TABLE 4
Comparison of Child Support Coefficients between OLS and 2SLS Estimations

Variable	Model 3 Coef.	P	Model 4 Coef.	P	Model 5 Coef.	P	Model 6 Coef.	P
2SLS Estimation								
OCSE Average Payment for Families on Welfare	-0.259	*	-0.397		-0.077		-0.017	
	(0.146)		(0.623)		(0.060)		(0.420)	
OCSE Payment Rate for Families on Welfare	-0.419		-2.594		-0.130		-0.948	
	(0.284)		(1.773)		(0.120)		(1.310)	
CPS Payment Rate for All Single-Mother Families	-1.010		-1.236	*	-0.269		-0.173	
	(0.676)		(0.764)		(0.275)		(0.299)	
CPS Payment Rate for Families on Welfare	-0.661	*	-0.579	*	-0.180		-0.104	
	(0.350)		(0.297)		(0.134)		(0.139)	
OLS Estimation								
OCSE Average Payment for Families on Welfare	-0.272	***	-0.398	***	-0.064	***	-0.167	***
	(0.045)		(0.056)		(0.023)		(0.032)	
OCSE Payment Rate for Families on Welfare	-0.321	***	-0.335	***	-0.064	**	-0.162	***
	(0.062)		(0.079)		(0.026)		(0.043)	
CPS Payment Rate for All Single-Mother Families	-0.471	***	-0.034		-0.041		0.024	
	(0.088)		(0.077)		(0.033)		(0.038)	
CPS Payment Rate for Families on Welfare	-0.212	***	-0.037		0.013		0.030	
	(0.065)		(0.054)		(0.026)		(0.028)	

Note: Robust standard errors are in parentheses.
* significant at 10 percent level; ** significant at 5 percent level; *** significant at the 1 percent level

BEST COPY AVAILABLE

analyses that omit child support. Then we used the results from models 3, 4, 5, and 6 in Table 2 that are based on our preferred measure of child support to simulate the effects of improvements in unemployment rates, welfare waivers, and improvements in child support. Table 5 presents the simulation results. Based on the estimated results of model 1, unemployment rates and welfare waivers explain 42 and 30 percent of caseload decline, respectively. When we use the model with state-specific time trends, the effect of unemployment rates decreases to 34 percent and the effect of welfare decreases to 20 percent. After we take child support into account (models 3 and 4), child support on its own explains 17 to 24 percent of the caseload decline; welfare waivers decline to between 17 to 29 percent and unemployment rates decline to 27 to 38 percent. In dynamic simulations[7] (models 5 and 6), child support explains 23 to 60 percent of the caseload decline; welfare factors decline to between 5 and 15 percent and unemployment rates explain about 29 percent. The fact that the share explained by welfare waivers and unemployment rates declines after including child support suggests that some of the decline in welfare caseloads attributed to welfare waivers and unemployment rates in previous studies is probably due to the improvement of child support.

VI. CONCLUSION

Previous research on the determinants of welfare caseloads has not incorporated the effects of child support. This is regrettable because legislators passed laws to strengthen enforcement with the expectation that stronger child support enforcement would reduce welfare costs and caseloads. Furthermore, their expectations were not unreasonable because there are good theoretical reasons and relatively strong empirical support for the belief that strong enforcement reduces welfare caseloads by deterring entrances into and promoting exits from welfare and by deterring divorce and nonmarital births. Finally, child support enforcement among welfare families has improved dramatically in recent years.

[7] For the method of dynamic simulation, see Ziliak, Gundersen, and Figlio (2000).

TABLE 5
Simulation of Recent Caseload Changes

	1994	1996	% Change wrt/ 94	% Explained by Independent Vars.
Observed: Caseloads / Female Population Aged 15–44	0.0700	0.0618	-11.71%	
Predicted Value Based on:				
Model 1 (w/o state time trends)				
Unemployment Rate		0.0666	-4.87%	41.59%
Welfare Waiver		0.0676	-3.46%	29.51%
Model 2 (w/ state time trends)				
Unemployment Rate		0.0672	-4.00%	34.15%
Welfare Waiver		0.0684	-2.36%	20.12%
Model 3 (w/o state time trends)				
OCSE Average Payment for Families on Welfare		0.0686	-1.97%	16.78%
Unemployment Rate		0.0669	-4.43%	37.80%
Welfare Waiver		0.0676	-3.43%	29.27%
Model 4 (w/ state time trends)				
OCSE Average Payment for Families on Welfare		0.0680	-2.86%	24.39%
Unemployment Rate		0.0678	-3.17%	27.07%
Welfare Waiver		0.0686	-1.99%	17.02%
Model 5 (w/o state time trends)				
OCSE Average Payment for Families on Welfare		0.0681	-2.71%	23.17%
Unemployment Rate		0.0676	-3.43%	29.27%
Welfare Waiver		0.0688	-1.71%	14.63%
Model 6 (w/ state time trends)				
OCSE Average Payment for Families on Welfare		0.0651	-7.00%	59.76%
Unemployment Rate		0.0677	-3.29%	28.05%
Welfare Waiver		0.0696	-0.57%	4.88%

Employing annual state panel data from 1980 to 1996 to examine the effects of child support enforcement on welfare caseloads, this paper provides evidence that child support plays a moderate to large, and hitherto unrecognized, role in reducing welfare caseloads. Specifically, depending on the model, our estimates imply that the improvement in child support collection between 1980 and 1996 reduced welfare caseloads by 12 to 17 percent in 1996. Without the improvement of child support collection over the period, the mean welfare participation rate in 1996 would have been between 7.02 and 7.45 rather than the actual 6.18. In the 1994–1996 simulation, child support on its own explains 17 to 60 percent of the caseload decline. The inclusion of child support largely improves the ability to explain the change in welfare caseloads that would not be explained by welfare and/or economic factors alone, although it also somewhat decreases the estimated effect of those other factors.

After the 1996 welfare reform, national caseloads decreased by 30 percent, from 4.1 million in 1996 to 2.9 million in 1998. This dramatic decrease is expected to bring a new round of caseload studies and studies of the well-being of single mothers after welfare. This paper provides evidence that, in addition to the strong effects of the economy and welfare reform, the effect of child support on reducing caseloads is substantial and significant and thus cannot be overlooked in caseload studies. Studying the effects of child support on welfare caseloads is also particularly timely in light of recent changes in child support policy at the national level. For instance, the 1996 welfare reform law gave states the option to eliminate the $50 pass-through to mothers on welfare for whom child support is being collected. This change may affect mothers' willingness to cooperate with child support enforcement, which might increase welfare caseloads in the long run, but it may also decrease their incentive to be on welfare, which should decrease caseloads in the short run. These and other effects of the 1996 child support reforms will be important to study in the years to come.

TABLE A1
Means and Standard Deviations of Analysis Variables

Variable	1980–96	1980	1988	1996
Unemployment Rate	6.60	6.77	5.48	5.21
	(2.19)	(1.62)	(1.89)	(1.24)
Male 10th Wage Percentile [$ real 1996]	6.77	7.73	6.76	6.35
	(1.07)	(1.18)	(1.18)	(0.76)
Male Median Wage [$ real 1996]	14.70	15.82	15.05	13.67
	(2.10)	(2.38)	(2.29)	(1.66)
Female 10th Wage Percentile [$ real 1996]	4.93	5.11	4.91	4.91
	(0.62)	(0.61)	(0.70)	(0.56)
Female Median Wage [$ real 1996]	9.80	9.41	9.99	10.17
	(1.48)	(1.44)	(1.63)	(1.34)
State Population [1,000]	4,827	4,443	4,815	5,202
	(5264)	(4703)	(5269)	(5793)
Female Population Aged 15–44 [1,000]	1,120	1,037	1,138	1,166
	(1231)	(1107)	(1271)	(1307)
Single Mothers [1,000]	166	128	164	196
	(188)	(148)	(182)	(226)
Yearly Maximum AFDC Benefit Level [$ 1,000 real 1996]	6.615	7.985	6.714	5.631
	(2.482)	(2.780)	(2.373)	(2.098)
Yearly Medicaid Benefit Level [$1,000 real 1996]	3.747	3.644	3.615	3.977
	(1.049)	(1.046)	(1.057)	(1.387)
Any Major Welfare Waiver	10.73	0.00	0.00	74.51
	(30.97)	(0)	(0)	(44.01)
Party of Governor (Republican=1)	41.29	37.25	47.06	60.78
	(49.26)	(48.83)	(50.41)	(49.31)
Republican Is Major Party of Both State Senate and House	19.38	21.57	17.65	37.25
	(39.55)	(41.54)	(38.50)	(48.83)
Democrat Is Major Party of Both State Senate and House	61.25	70.59	62.75	41.18
	(48.75)	(46.02)	(48.83)	(49.71)
Percent Black	10.73	10.39	10.57	11.10
	(12.00)	(12.53)	(12.21)	(12.02)
Percent Elderly	12.51	10.95	12.54	14.02
	(2.41)	(2.14)	(2.17)	(2.72)
Percent with Less Than High School Education	25.00	32.75	25.89	17.19
	(8.06)	(7.66)	(5.91)	(4.88)
Percent of Female-Headed Families	10.83	10.35	11.29	10.50
	(2.54)	(2.49)	(2.52)	(3.01)
New Immigrants [1,000]	16	10	12	N. A.
	(50)	(23)	(31)	N. A.
Female Legislator Ratio	15.96	9.82	15.36	20.69
	(7.74)	(5.57)	(6.79)	(7.32)

Notes: Unit is state. Standard errors are in parentheses.

BEST COPY AVAILABLE

TABLE A2
Single Mothers with Child Support Payments Regression

Variable	Model 1 Coef.	S.E.	P	Model 2 Coef.	S.E.	P
Female Legislator Ratio, t-3	-0.127	0.147		-0.457	0.203	**
Square of Female Legislator Ratio, t-3	0.888	0.347	**	1.683	0.539	***
Unemployment Rate	-0.258	0.192		-0.357	0.181	**
Unemployment Rate, t-1	-0.201	0.232		-0.226	0.207	
Unemployment Rate, t-2	-0.087	0.187		0.108	0.175	
Log (Male 10th Wage Percentile) [$ real 1996]	-0.017	0.023		-0.020	0.022	
Log (Female 10th Wage Percentile) [$ real 1996]	0.002	0.027		-0.002	0.025	
Log (Male Median Wage) [$ real 1996]	0.078	0.035	**	0.063	0.035	*
Log (Female Median Wage) [$ real 1996]	-0.057	0.038		-0.076	0.037	**
Log (Yearly Maximum AFDC Benefit)	-0.003	0.024		0.028	0.028	
Log (Yearly Medicaid Benefit Level [$ real 1996])	-0.013	0.006	**	0.002	0.007	
Any Major Waiver	0.026	0.007		0.013	0.008	
Republican Governor	0.004	0.004		0.004	0.004	
Major Party in State Senate and House is Republican	-0.029	0.007	***	-0.010	0.007	
Major Party in State Senate and House is Democrat	0.010	0.006		0.008	0.006	
Percent Elderly	0.516	0.205	**	-0.355	0.548	
Percent Black	-0.316	0.443		0.803	0.784	
Percent with Less Than High School Education	-0.230	0.123	*	0.164	0.178	
Percent Immigrants, t-1	-1.986	1.749		-2.069	1.575	
Percent Immigrants, t-2	-0.154	1.806		1.382	1.684	
Stae and Year Effects	Yes			Yes		
State Time Trends	No			Yes		
Partial F of Instruments	8.32	***		5.74	***	
Adjusted R^2	0.686			0.756		

* significant at 10 percent level; ** significant at 5 percent level; *** significant at the 1 percent level

References

Beller, A., and J. Graham. 1993. *Small Changes: The Economics of Child Support.* New Haven, CT: Yale University Press.

Besley, Timothy, and Anne Case, 1997. "Women in Politics: Finding Instruments for Incidence Analysis." Working Paper, London School of Economics.

Blank, Rebecca M. 1997. "What Causes Public Assistance Caseloads to Grow?" National Bureau of Economic Research Working Paper 6343.

Blau, Francine, Lawrence Kahn, and Jane Waldfogel. 1999. "Does Welfare Influence Young Women's Marriage, Single Parenthood, and Female Headship Decisions?" Working Paper, Columbia University.

Bound, John, David A. Jaeger, and Regina M. Baker. 1995. "Problems with Instrumental Variables Estimation When the Correlation between the Instruments and the Endogenous Explanatory Variable Is Weak." *Journal of the American Statistical Association* 90: 443–450.

Case, Anne. 1998. "The Effects of Stronger Child Support Enforcement on Non-Marital Fertility." In *Fathers Under Fire: The Revolution in Child Support Enforcement,* edited by I. Garfinkel, S. McLanahan, D. Meyer, and J. A. Seltzer. New York: Russell Sage Foundation.

Congressional Budget Office (CBO). 1993. "Forecasting AFDC Caseloads, with an Emphasis on Economic Factors." Staff Memorandum. Washington, DC: CBO. July.

Council of Economic Advisers (CEA). 1997. "Technical Report: Explaining the Decline in Welfare Receipt, 1993–1996." A Report by the Council of Economic Advisers. Washington, DC. April.

Council of Economic Advisers (CEA). 1999. "Technical Report: The Effects of Welfare Policy and the Economic Expansion on Welfare Caseloads: An Update." A Report by the Council of Economic Advisers. Washington, DC. August.

Figlio, David, and James Ziliak. 1999. Welfare Reform, the Business Cycle, and the Decline in AFDC Caseloads. In *Economic Conditions and Welfare Reform,* edited by S. H. Danziger. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research. Pp. 17–48.

Freeman, Richard, and Jane Waldfogel. 1998. "Dunning Delinquent Dads: The Effect of Child Support Enforcement Policy on Child Support Receipt by Never Married Women." NBER Working Paper 6664.

Garfinkel, Irwin, Daniel Gaylin, Chien-Chung Huang, and Sara McLanahan. 2000. "Will Child Support Enforcement Reduce Nonmarital Childbearing." Unpublished paper.

Garfinkel, Irwin, and Marieka Klawitter. 1990. "The Effects of Routine Income Withholding of Child Support on AFDC Participation and Costs." *Journal of Policy Analysis and Management* 9(2): 155–177.

Garfinkel, Irwin, Daniel Meyer, and Sara McLanahan. 1998. "A Brief History of Child Support Policies in the United States." In *Fathers Under Fire: The Revolution in Child Support Enforcement*, edited by I. Garfinkel, S. McLanahan, D. Meyer, and J. A. Seltzer. New York: Russell Sage Foundation. Pp. 14–30.

Garfinkel, Irwin, and Philip Robins. 1994. "The Relationship between Child Support Enforcement Tools and Child Support Outcomes." In *Child Support and Child Well-Being*, edited by I. Garfinkel, S. McLanahan, and P. Robins. Washington, DC: Urban Institute Press.

Garfinkel, Irwin, Philip P. Robins, Patrick Wong and Daniel Meyer. 1990. "The Wisconsin Child Support Assurance System: Estimated Effects on Poverty, Labor Supply, Caseloads, and Costs." *Journal of Human Resources* 25:1–31.

Greene, William. 1993. *Econometric Analysis*. Englewood Cliffs, NJ: Prentice Hall.

Guyer, Jocelyn, Cynthia Miller, and Irwin Garfinkel. 1996. "Using the Office of Child Support Enforcement Data to Rank the States: A Cautionary Note." *Social Service Review* 70: 635–652.

Hanson, Thomas, Irwin Garfinkel, Sara McLanahan, and Cynthia Miller. 1996. "Trends in Child Support Outcomes." *Demography* 33: 483–496.

Hausman, J. A. 1978. "Specification Tests in Econometrics." *Econometrica* 46:1251–1271.

Huang, Chien-Chung, James Kunz, and Irwin Garfinkel. 2000. "The Effect of Child Support on Welfare Exits and Re-Entries." Paper presented at the annual workshop of the National Association for Welfare Research and Statistics, Scottsdale, AZ. August.

Legler, Paul. 1996. "The Coming Revolution in Child Support Policy: Implications of the 1996 Welfare Act." *Family Law Quarterly* 30: 519–563.

Lerman, Robert, and Elaine Sorensen. 2000. "Child Support: Interactions between Private and Public Transfers." Paper presented at the NBER Conference on Means-Tested Transfer Programs in the U.S., Boston, MA. May.

Meyer, Daniel R. 1993. "Child Support and Welfare Dynamics: Evidence from Wisconsin." *Demography* 30: 45–62.

Meyer, Daniel, Irwin Garfinkel, Philip Robins, and Donald Oellerich. 1991. "The Costs and Effects of a National Child Support Assurance System." Discussion Paper no. 940-91, Institute for Research on Poverty, University of Wisconsin–Madison.

Moffitt, Robert. 1992. "Incentive Effects of the U.S. Welfare System: A Review." *Journal of Economic Literature* 30: 1–61.

Moffitt, Robert. 1999. "The Effects of Pre-PRWORA Waivers on AFDC Caseloads and Female Earnings, Income, and Labor Force Behavior." In *Economic Conditions and Welfare Reform*, edited by S. H. Danziger. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research. Pp. 91–118.

BEST COPY AVAILABLE

Nixon, Lucia A. 1997. "The Effect of Child Support Enforcement on Marital Dissolution." *Journal of Human Resources* 32: 159–181.

Plotnick, Robert, Irwin Garfinkel, Daniel Gaylin, Sara McLanahan, and Inhoe Ku. 1998. "Better Child Support Enforcement: Can It Reduce Teenage Premarital Childbearing?" Paper presented at the annual meeting of the Population Association of America..

Robins, Philip. 1986. "Child Support, Welfare Dependency, and Poverty." *American Economic Review* 76: 768–788.

Robins, Philip, and Katherine Dickinson. 1985. "Child Support and Welfare Dependence: A Multinominal Logit Analysis." *Demography* 22: 367–380.

Sorensen, Elaine, and Ariel Halpern. 1999. "Child Support Enforcement: How Well Is It Doing?" Urban Institute Discussion Paper 99-11.

U.S. House of Representatives, Committee on Ways and Means. Various years. *Green Book. Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means.* Washington, DC: Government Printing Office.

Wallace, Geoffrey, and Rebecca Blank. 1999. "What Goes Up Must Come Down?" In *Economic Conditions and Welfare Reform*, edited by S. H. Danziger. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research. Pp. 49–90.

Willis, R. J. 1999. "A Theory of Out-of-Wedlock Childbearing." *Journal of Political Economy* 107(6): 33–64.

Ziliak, James P., David N. Figlio, Elizabeth E. Davis, and Laura Connelly. 1997. "Accounting for the Decline in AFDC Caseloads: Welfare Reform or Economic Growth?" Discussion Paper no. 1151-97, Institute for Research on Poverty, University of Wisconsin–Madison.

Ziliak, James P., Craig Gundersen, and David N. Figlio. 2000. "Welfare Reform and Food Stamp Caseload Dynamics." Working paper available on the Web at <http://darkwing.uoregon.edu/~jziliak/ FoodStamps_May00.pdf>.